October 23, 2002

MODIS sensor Working Group (MsWG) Summary

Attendance: Bill Barnes, Bob Barnes, Stuart Biggar, Vincent Chiang, Roger Drake, Bob Evans, Shaida Johnston, Gerhard Meister, Chris Moeller, Vince Salomonson, Junqiang Sun, Gary Toller, Eric Vermote, Joe Esposito

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Scheduled Items

Item 1 Sensor Status

BB) Terra is functioning well. Only 2 taxi errors during a recent BB warmup/cooldown, which is much lower than before the formatter change from Aside to Bside. Aqua is also functioning well. One recent dropout was due to recorder over-run. The dropout during lunar calibration was due to operator error.

Item 2 SWIR Leak - Lunar Impact (Moeller)

BB) Basically moon makes no difference.

CM) Moonshine does not cause a significant effect to the correction. The result for the B26 correction for Terra is good and indicates that the correction is good for Aqua. Since B28 is used, as is, from L1A, then errors in B28 will carry over into the B26 correction.

VC) Correlation is higher for B23-25 than B28. MCST has determined SWIR leak coefficients using B23-25, 28 and applied them to m_1. Currently these m_1, leak coefficients, and test L1B code are being used in tests to determine scaled integers (L1B) for comparing the effect on scene images.

Item 3 Vicarious Results from RRV (Thome)

BB) Summarizing Kurt's results: Vicarious data analysis yields a 4% ratio bias between Aqua and Terra.

SB) The image (radiance) data yields that the ratio of Aqua and Terra is unity but that view angle differences cause a 4% effect.

EV) BRDF can change by 4% over this view angle difference.

RD) Measured SD BRDF for Terra and Aqua are very consistent.

JS) The ratio of Aqua to Terra (Aqua higher by 10 %) is consistent with Kiefer's results (as taken from the web). Aqua and Terra view opposite hemispheres of the moon (east and west) and Kiefer's results shows that there is 12% east/west lunar brightness difference.

Around the Table

Participant: Vince Salomonson – Igor Appel has been looking at ice scenes using the 500m resolution bands. He sees a pixel-to-pixel variation (not mirror side effect).

Participant: Junqiang Sun – The lunar radiance is at least 4 orders of magnitude lower than the solar radiance and is 2 orders of magnitude less than cross talk.

Participant: Bob Evans – Miami is doing a cross check between Aqua and AVHRR using match-up points and global scenes. We are also cross matching Terra with several other instruments (e.g. TRMM VIRS, Pathfinder, AMSR, TMI). Results will be presented at next IWG meeting.

Compiled by J. A. Esposito October 23, 2002

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